

Nevada's Energy Economy Declaration

**By: Jim Groth, Director
with Robert Nellis
Office of the Governor
Nevada State Office of Energy**

Nevada's Economy

Upon returning to Nevada from a recent attempt to attract a company to build a solar manufacturing plant in our state, I am compelled to outline a plan of attack to successfully develop Nevada's energy economy. As I flew over Nevada on the way home I couldn't help but think that just one hundred years ago the idea of flying across the country was physically, scientifically, technologically, and economically infeasible. No, it was a bridge too far and not possible. It occurred to me that such is not the case with solving and correcting Nevada's economic distress and related debt, educational, housing, and employment woes. More than anything else we face a process problem and a matter of our collective will. Yes, it will simply take us Nevadans standing at the precipice, the cliff edge, at one of the titanic water tight doors, if you will, and declaring we're mad as heck at our current situation, and we're not going to take it anymore.

In working on a solution to Nevada's energy problem over the last two years, it has become clear to me that Nevada possesses the talent and ability to deliver itself out of recession. All that is needed is for Nevada's collective ability to be harnessed and focused on lifting itself out of its economic situation by developing our energy resources. I am convinced that once harnessed Nevadans can quickly move forward with such strength that the inertia created will drive Nevada to unstoppable success and straight out of the recession. What I have found is that the problem with building Nevada's new energy driven economy is not a physical one of lacking natural resources or talent, but the problem boils down to man-made process problems.

What do I mean by process problems? I mean simply that more often than not, the greatest thing holding Nevada back from achieving economic success right now is the need to satisfy onerous policies or laws and have all the "right" paperwork in order. Laws, regulations, and policies are all man-made paper constructs and, therefore, can easily be changed by man. There are energy projects literally ready to break ground today; "shovel ready" as Washington refers to them. But, Washington's own rules stand in the way of approving projects that would put Nevadans to work today. I don't believe this situation can be tolerated any longer.

A common sense approach needs to be applied rather than allowing those who have the resources and ability to build now to be delayed because of a governmental agencies' need to have all their paperwork in order, based on onerous laws and procedures. By the time we all wait for the paperwork to be in order Nevada will find itself facing a worse economic crisis than it is today. This may have been somewhat tolerable during booming economic times, but when it begins to stand in the way of progress and economic recovery, a line must be drawn and Nevadans must say we have had enough.

In Nevada, we must be careful to “earn” our way to prosperity. I believe if we as Nevadans chose to remove barriers to development of the energy economy we will create sustainable, viable, businesses. Rather than all the public reaction to our State’s debt and spending our time and energy focused on the crisis and what we need to do about it, we could instead focus that time and energy in a proactive manner and earn our way out.

Energy Economy

Let’s work together on solving the roadblocks to Nevada’s economic recovery. Nevada has an overwhelming abundance of natural resources, the technological knowhow, and certainly the immense brain trust to develop and operate a third leg in support of our state’s economy. I see the first two legs being the well established hospitality and mining industries. The third leg is the energy economy that is waiting to be tapped. Our “ripe for the taking” opportunity to develop energy resources within the state will not only grow a new, previously untapped, and environmentally sound economic engine, but these resources will enhance both mining and hospitality. If you believe that Nevada needs to develop a new energy economy like I do, then join me and let’s work together to make that happen and break down any barriers that would keep Nevada from being successful.

If we solve our process road blocks, the hospitality industry could reach new heights by the Battle Born State attracting worldwide attention and focus. Our Energy Office and the mining industry here in Nevada are working closely to drive, support and enhance their energy requirements. Mining in Nevada is beginning to lead the way for the world in renewable energy development. Imagine Nevada being the center of the new renewable energy economy where people from all over the world would come and learn what’s happening on the cutting edge of the industry. Hospitality is beginning to lead with conceptual plans to have an energy theme park on the Las Vegas strip showing twenty technologies in action in a close thirty-acre area.

We are hurting in Nevada and as a nation. We have no real physical barriers to overcome like the analogy of flying over the country 100 years ago. No, it is merely process problems that keep us from our destiny, our prize, our winning potential. We are hurting in Nevada as we lead the nation in unemployment. My fear though, is that our country will wait until we have hit rock bottom before we take sufficient action. The unemployment rate is up to 13% (much higher than that in trades). When will it be painful enough to take action? Will 20% unemployment be the trigger for action, perhaps 30%, 50% public & private sector layoffs? Or, will it take mass community soup and bread lines?

Development of the new Nevada energy economy is widely supported, but just not feverishly activated yet as many move slowly like they did when the economy was booming. One could succeed with moving slowly when the economy was booming without many noticeable consequences, but we have no such luxury now. It is analogous to selling a home when home prices always went up. A person could sell nearly any home, anywhere, at any time and it would go up in value. In fact, the more a seller dragged their feet and took their time the better. Now, we are in the opposite situation. We must deploy resources on the ground and harness our energy resources now if we are to be successful. Allowing process issues to slow things down when action is what is needed right now is inexcusable.

United Nevada

Energy is the great bi-partisan issue. Very few oppose the “renewable economy” in Nevada. Even the credit crunch in the money market is not an issue; in fact, big institution renewable finance is looking for solid, strong-rated development vehicles here in Nevada to put capital. So, there are no process problems in this area.

What are the consequences of inaction right now? In the past ten months nine major renewable energy development companies worth billions in potential annual revenues and key exponential tax bases have gone to our competitors in Arizona, New Mexico, Texas, and Michigan. As stated, I am returning from a solicitation trade mission in an attempt to ensure we don't lose another manufacturer to our competitor states.

What is contributing to Nevada losing business to competitor states? Nevada has not and cannot match the upfront cash and “shell and land” type offerings. Michigan, for example, has a serious game face in the energy development solicitation by pooling their best talent to attract business. No doubt you have seen that national advertising and the upfront cash incentives offered are compelling and significant.

In our Energy Office, we wear our “zero percent of zero equals zero” buttons to remind us and others of the necessary mission and action required. This statement helps to remind us daily of the urgency and damage of energy economy driving business's choosing outside of Nevada to anchor. Politically some may debate the nature of the incentives to attract business. Terms such as, “corporate welfare” or other tax abatement debate issues may be argued till the cows come home or we lose another nine businesses. But, there is no room to debate when we see Suntech solar going to Phoenix where Nevada received zero percent of zero on that deal!

Can there be any argument that when we lose business to another state Nevada receives absolutely nothing? In fact, it's actually a net negative to Nevada, because in the case of Suntech, one of China's largest solar panel manufacturers, Nevada will end up buying product from them in Arizona, giving all that tax revenue to a neighboring state. Can anyone disagree with that? Not only did Nevada not gain any tax revenue, but Nevada will now have to watch those lost tax dollars go to Arizona. While these issues continue to be debated, Nevada stands to lose companies on a monthly and weekly basis.

Nevada's business friendly tax environment is certainly inviting in today's economic climate, though the immediate gratification, up front incentives have tipped some advantage to our competitors. I am emphasizing this “competitive” environment because we must move quickly, in early 2010, if we are to have a chance at winning future business.

In order to succeed, Nevada needs to put on a “war room,” hours and days thinking mindset. We must not wait to react to these devastating business losses; we must implement a strategy modeled after a General Patton or Schwarzkopf type push. Along those lines, we are building a “Nevada Energy Economic Strike Force” (details to follow).

Utility Incentives

The renewable energy development opportunity will ultimately be driven by energy export potential. California has an 80,000 MW peak load capacity market. Our ability to pipe electricity from the north, central and southern areas of the state is paramount in our capability to benefit

from the huge CA market. As I am just returning to solicit a solar PV panel manufacturer to the state, those eager and willing developers must know there is an intra and interstate pipeline for development and market. While we appreciate a vibrant and successful utility and want to assist in sustaining a profitable environment for them, it is not the utility that decides the future of Nevada's energy economy; it is Nevadans.

Just as location, location, location fosters success in traditional real estate, Nevada's ability to export, export, export, will drive the long term economic energy engine within the state. Straight energy economy tax base revenue and between three and five to one exponential tax base revenue could overtake but also significantly enhance our economic position in the gaming/hospitality and mining industries. As I have toured the brain trust of the state over the past two years, the last three months as director of the Nevada Energy Office, the extensive dialogue with many sources all agree that our need to export, and quickly, is crucial to our economic livelihood.

We must seize the leadership role in the nation on the renewable energy front. Excuses and impasse that allow month after month, year after year to pass by literally allowing other states to attract vertically integrated energy companies is a serious and devastating mistake on our part. Failure to develop is another of the process problems. True renewable portfolio standards must be updated annually or bi-annually to keep pace with the reality and new opportunities in the market place.

For example, in Nevada our Renewable Portfolio Standard (RPS) states that 25% of our electrical energy will come from renewable sources by 2025. Yet, that does not mean that 25% of our electrons generated must come from renewable sources. Convolved "carve outs" for different technologies, north versus south, and allowing energy efficiency credit to be included in the renewable standard clouds the issue and allows for confusion on just what is exactly mandated. Energy efficiency is a critical part of reducing cost and increasing conservation of resources, but it should be stand alone legislation, not included as part of mandating a percentage of electrical generation. I propose to remove it from the RPS and create a more positive stand alone energy efficiency mandate.

In addition to changing the RPS, I propose increasing the net-metering cap and eliminating the 2.45 multiplier for solar energy projects. Renewable energy needs to stand alone as a competitive and viable energy technology and not be given "extra credit" if you will simply because it is considered "green." To accomplish and address these objectives I am building the "Nevada Energy Economy Strike Force" which will be composed of utility leadership, state agencies, private sector subject matter expertise, and legislative support to identify the "war room" requirements to make Nevada the premier state for both the development of renewable energy and innovation of new technologies in the field.

Nevada Lands

A large piece in developing Nevada's competitive edge is to address Nevada's land availability situation. Nevada is not really a big state yet; we are in reality functioning as if we were the size of Vermont. Unbelievably, Vermont actually has more acreage under their state's rightful ownership (private and state) than Nevada does. Nevada is 85% federally owned and occupied. Pure and simple, this prevents Nevada from economically controlling its own destiny.

My best decision thus far as the energy director in Nevada was hiring Robert Nellis from the Division of State Lands. Allen Biaggi was gracious enough to allow me to steal Robert from the Department of Conservation and Natural Resources. Robert clearly and concisely describes the federal ownership issue in Nevada, and offers a 2010 Congressional state land grant act solution in his document entitled, *"Federal Land Ownership in Nevada and its Impact on the State's Ability to Develop a Renewable Energy Economy."* I would encourage you to take a few minutes to read his document at this point, which begins on page nine.

Now that you have had a chance to review Robert's land grant proposal, which I wholeheartedly agree with, I would like to add a few observations of my own. In Nevada, as the Battle Born State, we proudly and generously contribute to our nation in support of the finest military training and storage facilities in the world. Nevada boasts two of the best military training centers with the Fallon Naval Air Station's "Top Gun" flight school and Nellis AFB, the number one warrior training base in the world. As Nevadans, we support the military. The contribution and support is mutual.

In keeping with that spirit, I propose designating a perimeter around the property of each of those installations, and allow the military to control and help defend the United States as they see fit, without interference from developers. It is remarkable to me that Nevada can be home to two of the greatest training bases in the world in support of our country's national defense, and yet we are asked to give up an additional 80% of our lands to federal ownership while our neighboring states are only burdened with around half as much federal ownership. Clearly, this situation cannot be allowed to continue.

Nevada has tens of millions of acres of federally controlled and occupied land which should be of use to the direct benefit of the State of Nevada. It should not fall to the federal government to exploit Nevada's energy resources by issuing revenue generating permits. Nor should they be in the fee collection business in the state when it comes to developing energy. Even when a portion of those revenues are returned to the state it is still not the federal government's place to develop property in Nevada. Self-determination on how Nevada's lands are developed is simply a states' rights issue. Why? The federal government cannot concern itself with whether Nevada is able to develop a competitive edge in the energy economy to other states. Only Nevadans can possess the necessary drive and motivation to ensure Nevada positions itself effectively in the new energy economy.

Our top two competing states for developing a renewable energy economy have less than half the federally controlled land: Arizona 48%, New Mexico 42%. Our state legislators and congressional delegation must act to allow Nevada a "fair" energy economy playing field. Nevada is at a severe disadvantage, and it is crippling us, even killing us economically. It must end now in 2010. Nevada lands must be developed now under state control and direction to harness the pent up energy potential in the state.

Action Points

Why must Nevada act now? Nevada has a 7,200 MW peak capacity load, while our hungry and bureaucracy-mired neighbor to the west has an 80,000 MW potential capacity. Our focus now and beyond land acquisitions as described, needs to be a mutual plan of attack with our primary electrical utility, NV Energy.

Now is the time to act. No more waiting. I have the distinct honor as the director of the Nevada Office of Energy to attend many “acronym” meetings, summits, panels, round tables, and workgroups in the past three months since my coming on board in December 2009. I have had the pleasure of involvement in passionate, rich, intense, succinct discussion on the issues, roadblocks, and barriers to our energy economy way forward. The brain trust in Nevada is absolutely here, available, and ready to rock, it’s just that these dots stay disconnected.

At the same time, my feelings for the Nevada energy economy listening to “could of, should of, ought to, maybe, can be, and should do” conversations are now declared OVER by me. I am fed up, as I am sure many of you are, with month after month, year after year discussions on “great resource, Saudi of solar, best geography, hungry renewable neighbor to the west” speeches and mantras, yet our progression in the development area is molasses. It is our Nevada right and privilege to lead the nation and the world as the energy leader in new renewable green, clean, economically sustainable technologies. Process problems on paper can no longer be allowed to get in the way. We won World War II in 3 ½ years, landed on the moon (40 years ago), and reduced cancers at incredible rates. And yet, when someone has the audacity to tell me “it’s just too difficult to move past the land issues and create renewable resources that Nevada can export in large quantities to California.” Pure garbage and now is going to be our opportunity to prove it.

We appreciate the appetite and the environmental laws and regulations created in California to develop “our market”. We at this time have requested audience with Governor Schwarzenegger to discuss the western transmission issues to carry renewable energy into his state. It is imperative that this dialogue start now and that we foster economic electrical delivery strategies which are to our good neighbor’s benefit.

There are also huge opportunities for low hanging fruit renewable development here in Nevada, right now. The potential for distributed generation of energy has room for significant current growth. We have a rebate program for solar, wind, and hydro in Nevada that has been successful, especially in solar. The NV Energy Renewable Generations team is an excellent, dedicated group helping promote and approve applications for these technologies. The main problem we face is limited capacity release. The program pays rebates to installed renewable systems customers, funding coming from renewable line item collection from all NVE ratepayers. My bill is about \$220/mo. from NV Energy and I pay approximately 90 cents for the program per statement.

Example: This program was started in Nevada by legislative action and PUCN regulation in the 2003-2004 timeframe. Nevada consumes, as stated earlier, more than 7000 megawatts of electricity at peak load requirement. Less than five megawatts per year of capacity for this program has been released in its 8th or 9th “step” iteration to date. So, when I talk about molasses here in 2010, we’ve added about 20 to 30 megawatts at best to the state’s renewable energy portfolio (RPS) through this program. Again, our latest step release (scheduled for 24 Mar 2010 and now pushed back to 21 Apr 2010) will only release about 2.1 megawatts of solar capacity. That capacity application process will fill up in about 30 minutes in the on-line application process. Only after all the projects are built in that step, many months later, will the next step of capacity be released. So it is a process that can be “bill boarded” as a whopping success, but the real solar energy capacity really being added to the overall state load is nil. I will point out once again that the renewable generations program team from NV Energy and supporting contractor employees have been phenomenal to work with, a stellar, proud group of professionals seeking to help at every turn with the citizens of Nevada. We simply need more solar capacity released. The Strike Force (as described later) will address it and solve it. Just a

process issue I remind you, not technology or cost as I described above in the pennies per bill it costs.

The net meter programs within the state which allow energy users to build renewable systems “on the customer side” of the meter can be stepped up and improved. Our very limited 1MW cap which only allows up to the amount consumed on a site to be “reverse metered” out to the grid for customer future use or “banking” of the credits needs to be significantly increased. The Strike Force will address the issue and solve bottlenecks.

The grid tie projects in Nevada as of March 2010, produce about 110 megawatts of solar statewide (Nellis AFB is 14MW and is not grid tied consuming all they generate), and about 350 megawatts of geothermal energy statewide. Since December 2007 when Nellis AFB commissioned its 14MW photovoltaic solar system, and Semptra Generations added 10MW which it is exporting to PG&E in California, that’s about our sum total of bragging rights in this “UV rich resource” state. A mere 24 megawatts in the “Saudi Arabia of Solar” and a few electrons in the solar generations’ program described above in now going on three years! Remember, 7000 megawatts peak load in Nevada, and 80,000 megawatts peak load in California = Mmmmmmmmoalsses. The local utility has stepped up their request for proposals and is nearing 700 megawatts in completed power purchase agreements through 2014. The utility has progressed and is doing a good job in many areas under what would be normal, cyclical economic situations.

But, folks, we are NOT in normal economic situations. We need to pull out all the stops. Our ability to develop this third leg of the economy stool in Nevada to mandate that energy assists mining and hospitality is paramount. Our potential is huge, our action a dismal failure. As the politicians in California close down areas for clean renewable energy generation development, we should have already been there ready to pump the electrons west. One opposing view is that if Nevada builds more transmission, those infrastructure investment costs will be borne by the backs of the ratepayer. My push back on that is the 175,000 unemployed Nevadans are ratepayers also. Jobs are key to these folks more than caring about whether their bill is \$4.00 higher in Nevada. And the tax and exponential tax benefit to the rest of us employed Nevadans will more than compensate for the cost of transmission construction. Also, many very large corporations are “eyeing” Nevada for this very potential, supplying much of the capital expenditure requirements to fund short run transmission lines.

I won’t take time here to describe the dozens of ridiculous stories such as why three miles of transmission line doesn’t get built in places like Indian Springs because of BLM, tribal, military, NDOT, utility and other feuding. Nevada, the great roaring energy lion, can’t stop the argument over which lion eats the mouse instead of feeding this needful economy with gross quantities of meat for which the great lion may feast on. We great Nevada Battle Born citizens are that lion, and we should stop accepting the scraps of the energy feud table.

Our ability to crush our competitors in Arizona, New Mexico, Texas, and Michigan for the vertical integration which is: education, manufacturing, production, and distribution due to our unbeatable resources and geography must be seized upon. No longer should we wait and hear the unrealistic poker playing stories of Governor Richardson of New Mexico stating how his state is developing as the renewable leader. As stated earlier in this document, we have lost far too many companies to these competitors; those companies that would reduce and reverse our state’s debt issues every day. Zero percent of Zero = Zero. Make it mean something to yourself.

Strike Force

We believe this will become the biggest “movement” in Nevada and gain heretofore unseen public notoriety and interest. We want all Nevada publications, broadcasters, and national news agencies to report the difference that is occurring in Nevada. As our weekly Nevada Energy Economy Strike Force strategic and tactical planning sessions close, and we swing the doors open, we foresee the press will clamor to know what action-taskers are coming this week, and we aim to provide the well aimed, penetrating ammunition in full court press mode. This is inertial seduction. This Force is sponsored by the Nevada State Office of Energy from the Office of the Governor, the Nevada Commission on Economic Development, and the Nevada Department of Business and Industry. We seek full citizen legislator support and will provide bill draft requests and PUCN submissions of course.

I will conclude here in this short summary of thought. I have said now is the time. The most unstoppable, immovable, intense, passionate, and infectious group of Nevadans will launch on 14 April 2010 at the Capitol building in Carson City. We are the Nevada Energy Economy Strike Force. While we will be composed of public employees, private sector energy experts, consultants, soldiers, utility experts, energy efficiency experts, educators, and all walks of life, most of all we are DOERS. As I asked potential force members to join the battle, if there was the slightest bit of hesitancy due to the time or other obstruction in their “day job” life, I ended the conversation and my request to join our team. The reason is due to the urgency of Nevada’s current economic situation. We can only afford to have the Strike Force made up of those who see building Nevada’s energy economy as worthy of being given the highest priority right now. If there is another way to solve Nevada’s economic woes that should take greater precedence, I am all ears.

But you know that’s not really how this has come about. That driven brain trust that I speak about so much out there and that I got to know over these past months and years already stepped up by showing their other actions and I just simply knew well in advance of this Strike Force conception who would step up for Nevada. It was not a verbal request; it was a common, intensely driven thread that we as a state are infinitely blessed but not filling our God-given destiny and potential to help the best and most needful citizens in the greatest state from the greatest nation on earth. And, if you believe as I do that you have been placed in your current role for such a time and hour as this, to link arms to create a stronger economy for Nevada, join us.

For those who say it can’t be done, step aside, as we are about to complete the task.

Nevada land grant document follows:

Federal Land Ownership in Nevada and Its Impact on the State's Ability to Develop a Renewable Energy Economy

Background

In 2010, Nevada finds itself with one of the worst jobless rates in the nation and facing one of the hardest hit economies of any state. It also leads the nation in foreclosure rates. With the end of the real estate boom, Nevada now relies mostly on the gaming and mining industries to support its economy. In the midst of the current recession, Nevada has been dubbed by the press as the “Saudi Arabia of Solar.” While it is true that Nevada has the *potential* to become the Saudi Arabia of solar, much work needs to be done to make that a reality.

In addition to gaming and mining, Nevada needs to develop a third leg to its economic stool in order to help lift itself out of the current recession. Becoming a leader in the renewable energy industry seems to be the only obvious and logical step for Nevada. Nevada is situated at what can become the center of the solar industry in America. The state has a unique pool of development talent left over from the construction boom which can be readily re-directed to deploy renewable energy projects quickly in Nevada. However, other Western states such as Arizona, New Mexico, Utah, and California are also positioning themselves to become the center of the solar industry.

Nevada needs to act quickly to create a business environment that attracts the best companies and brightest individuals in the renewable energy field if Nevada's goal is to emerge from the recession with a viable economy solidly established in the renewable energy market sector. A key to being able to implement quickly is to have the land resources readily available on which to build renewable energy projects in 2010 – not two, five, or ten years from now – but right now. In 2010, Nevada has the unenviable distinction of being the state with the most federal land ownership, which hampers the need to act quickly when necessary.

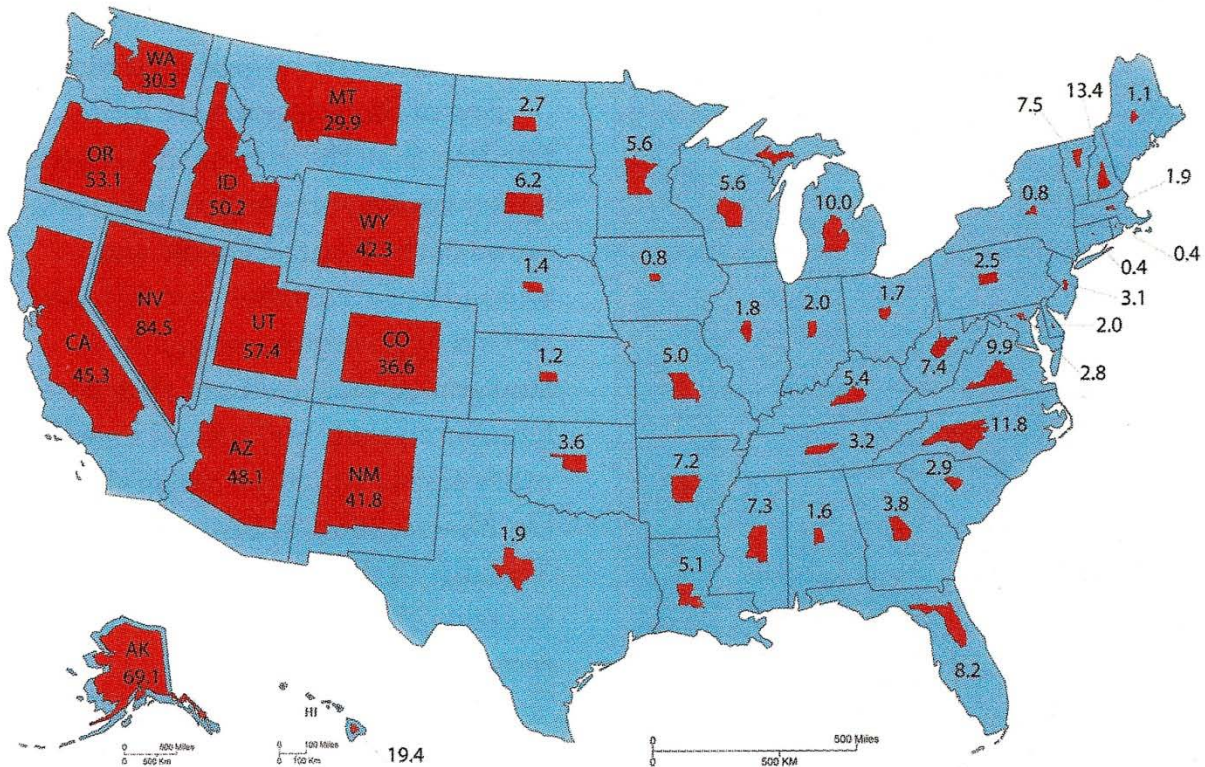
The most recent land data available reflects that Nevada is approximately 85% federally owned. By contrast, other Western states that are Nevada's direct competitors for solar business, Utah, Arizona, California, and New Mexico, are not equally burdened with federal ownership. Utah ranks the highest at 57% federal ownership. Arizona is next at 48%, California is 45%, and New Mexico is almost 42%. Because these states are not as encumbered with federal ownership, they are able to offer up private and state lands much faster for solar development since these state lands are not subject to lengthy and expensive federal environmental analyzes.

The map on the next page details the percentage of state territory owned by the federal government. According to 2004 data, the top 10 list of states with the highest percentage of federally owned land is as follows:

1. Nevada	84.5%	6. Arizona	48.1%
2. Alaska	69.1%	7. California	45.3%
3. Utah	57.4%	8. Wyoming	42.3%
4. Oregon	53.1%	9. New Mexico	41.8%
5. Idaho	50.2%	10. Colorado	36.6%

WHO OWNS THE WEST?

Federal Land as a Percentage of Total State Land Area



Data source: U.S. General Services Administration, *Federal Real Property Profile 2004*, excludes trust properties.

How and why Nevada came to be in the position of having 37% more federal ownership on average than its four main competitor states for solar business is a lengthy and involved discussion. This paper will focus on summarizing the main turning points through history to explain how Nevada ended up with 85% federal ownership and will present some solutions for what might be done to rectify the situation. Certain events such as the Sagebrush Rebellion will not be addressed here as the purpose of this paper is not to make the argument for Nevada to necessarily own all the federal lands within its borders. Rather, the intent of this paper is to provide some data to help make the argument as to why Nevada should be made whole and take its rightful place as an equal sovereign partner among its western sister state in the union. Doing so will enable Nevada to be on equal footing when competing for business in the new renewable energy economy.

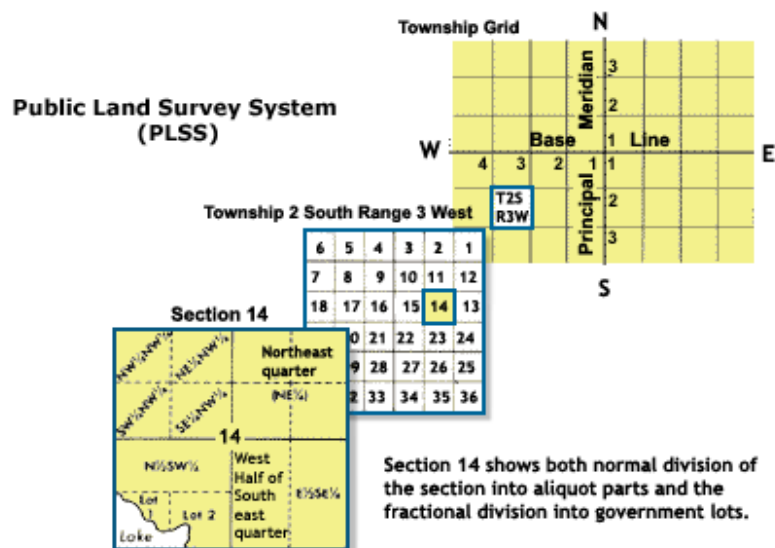
State Land Grants

Lands were granted by Congress to the states at the time each new state joined the union, beginning with Ohio in 1803 and ending with Alaska in 1959. These lands are also commonly referred to as "school lands," "grant lands" or "school trust lands" because they were granted to the states to support schools and similar public institutions. The intent of the grants was so the

states could sell or lease the lands granted to them for the purpose of depositing those revenues into a “permanent school trust fund” managed by each state for the benefit of the public schools. The principal in the account was to be held so it could grow in perpetuity as new funds were deposited. Only the interest from the school trust funds could be used to support the schools. As lands were transferred from the states to individuals, property taxes were then able to be levied on the lands for the purpose of supporting state and local government services. **The Nevada Constitution also requires all proceeds from lands granted by the federal government to the state to be used for educational purposes.**

General Land Ordinance

There were four phases of statehood accession that new states fell under depending on when they were ready to enter the union. The first phase began with the General Land Ordinance of 1785 which provided for the rectangular survey and sale of western lands. This system is known as the Public Land Survey System or PLSS and is still in effect today. The PLSS created a survey system of rectangular townships made up of 36 sections in each township. Each section is 36 square miles, which is equivalent to one square mile. See illustration below:



Under the General Land Ordinance of 1785, section 16 out of every township was to be granted to the states for the benefit of the public schools.

Within a few years, the Northwest Ordinance of 1787 was passed to create a system of territorial governance by which a territory could transition to statehood. This was the start of phase two of statehood accession. The most significant intended purpose of this legislation was its mandate for the creation of new states from the region, **once a population of 60,000 had been achieved within a particular territory.** At the time the population reached 60,000, the territory could petition Congress for admittance to the union. The people of the territory would have to pass a state Constitution that they would send to Congress for acceptance and Congress would pass an enabling act granting that territory statehood. The state would then be admitted on “**equal footing with all others (states).**” Ohio was the first state admitted under this ordinance in 1803 and nine other states would be admitted in this phase up until 1837.

Nevada's Statehood

Nevada was admitted under the third phase of statehood accession to the union which took place between 1845 and 1864. A change occurred in this phase to allow for any state admitted after 1848 to receive an additional section of land in each township. New states were granted section 36 along with section 16 in every township. When Nevada became a state on October 31, 1864, it received a land grant of approximately 3,900,000 acres. Interestingly, Nevada's population when it became a state was only estimated to be 6,857 according to the 1860 census. This is just over 10% of the 60,000 people needed according to the Northwest Ordinance under which a territory could seek admittance to the union. See census data in the following table:

Census	Nevada	Utah	New Mexico	Arizona
1860	6,857	40,273	93,516	No Data
1870	42,491	86,786	91,874	9,658
1880	62,266	143,963	119,565	40,440
1890	47,355	210,779	160,282	88,243
1900	42,335	276,749	195,310	122,931
1910	81,875	373,351	327,301	204,354

The question is: Why was Nevada seemingly rushed prematurely into statehood when its population had not yet reached 60,000? The most commonly accepted reason for Nevada being admitted to the union in spite of its sparse population was to ensure an electoral victory for the Republican Party during the presidential election of 1864. As 1864 was unfolding, interest in statehood was cooling in Nevada due, in large part, to the collapse of the economy caused by several mining stock scandals. Nevada's main priority at the time was mineral development in nature and not necessarily statehood.

However, in 1864 the Civil War was still ongoing and the political need arose in Washington to have one more state's vote to ensure a victory for Lincoln; Nevadans were supportive of the union and President Lincoln. The presidential election was shaping up to be a three-way election between George McClellan, John Fremont, and Abraham Lincoln. With a three-way race there was concern that a Constitutional crisis could arise if the Electoral College reached a three-way deadlock. If that were to happen, the House of Representatives might have to decide the election. Why? 24 of the 35 states at the time were a part of the union and the 11 states that formed the Confederacy were still recognized as part of the union under the Constitution. In spite of the Confederacy breaking away, the Constitution still required that 18 of the 24 states would have to agree on one of the three candidates for president. If 18 states in the union could not agree on one president, the union feared the result could be a Constitutional crisis, possibly resulting in a vacant presidency. Therefore, every electoral vote might be needed, which is why it seemed critical at the time for Nevada to join the union.

In September of 1864, Nevadans approved a state Constitution and voted in favor of statehood. In that same month, John Fremont withdrew from the presidential race, so the urgency that led Congress to pass Nevada's Enabling Act was now gone. Regardless, Lincoln proclaimed Nevada's statehood in October of 1864 just in time for the November election. This is important because **if Nevada had not been rushed into statehood in 1864 and simply entered the union under the same natural progression as other states, Nevada may not have found itself in its current land predicament.** In fact, according to the census, it wasn't until over a decade later that Nevada's population actually reached 60,000.

Nevada's Land Grant

By 1866, farmers and speculators were not rushing to purchase Nevada's school trust land sections. At the time, only 1287 acres of the 3.9 million acres had been purchased and only a few of the 3,300-plus townships in Nevada had been surveyed. Even today there are many Nevada townships which remain unsurveyed. As surveyors began laying out the townships and identifying sections within them, many of sections 16 and 36 were found to be in alkali flats or steep mountainsides. It also started to become clear that many of the original 3.9 million acre land grant were already reserved, appropriated or non-existent because of fractional townships. Exacerbating this problem was the fact that Nevada contains more mountain ranges than any other state, making most of the original sections unusable and unsalable.

In 1873, the State Surveyor General concluded that the 3.9 million acres would mostly include unmarketable barren mountains and mineral lands, which were all being reserved by the federal government. This would have made them unavailable to settlers regardless of whether the lands were good for cultivation or not. As a result, the Surveyor General suggested that Nevada ask Congress to accept back the grant for sections 16 and 36, and instead give Nevada a state-select land grant of lands that were fit for cultivation and more marketable. So, on March 8, 1879, the Legislature ceded all sections 16 and 36 back to the federal government in exchange for 2 million acres. By that time, only 73,000 acres of the original 3.9 million had been sold. Nevada's lack of land sales may have also been a reflection that the population had not yet grown to a point where its land may have been in more demand.

By 1880, Nevada made a deal with Congress to trade in the balance of the estimated 3.9 million acres in return for 2 million acres that Nevada could select from anywhere in the state. No state before or since has made such arrangements with Congress. By that time national law was adjusting to fit Great Basin conditions. The bill to exchange the 3.9 million acres for 2 million acres was considered by a Committee of the Whole on May 20, 1880. The committee report favored the proposal and read:

"...unlike any other State to which similar grants have been made by the general government, the surface of Nevada is in large part marked by sparsely timbered mountain ranges and intervening stretches of valueless desert basins and dry sage-brush valleys, susceptible of irrigation only by means of artesian wells, the few small streams within the state not affording water sufficient to irrigate the valleys through which they pass."

"The sixteenth and thirty-sixth sections falling alike upon mountain and desert, and the dry sage-brush lands being unsalable, except in large tracts, for cattle ranges or experimental irrigation by artesian wells, the State has been unable to dispose of more than 70,000 acres in 15 years, with the certainty of the demand growing less from year to year hereafter..."

Through a Congressional Act on June 16, 1880, Congress conveyed a grant of over 2 million acres to Nevada. It is interesting to note, when Nevada exchanged its nearly 4 million acres for half as much land, much of Nevada was viewed as being "valueless desert" that was "unsalable." It could not have been perceived at the time that these "valueless deserts" may actually hold the key to Nevada's future renewable energy economy. The fact that Nevada possessed a unique landscape from the other western states and that much of its original land grants were encumbered should have been cause to develop a new system for granting lands rather than compelling Nevada to forfeit nearly 1.9 million acres back to the federal government.

Arid States' Policy

The fourth and final phase of statehood accession into the union occurred during the period following the Civil War. At that time, there was growing recognition that some areas of the arid West were not susceptible to family farming. Perhaps this was due in no small part to Nevada's experience with its land grant. So, when Utah became a state in 1896, Congress granted it four sections in every township, sections 16, 36, 2, and 32. Utah's land grant totaled 5,844,196 acres. Later in 1912, when New Mexico and Arizona entered the union, they were also granted four sections in every township. New Mexico received 8,711,324 acres and Arizona received a land grant of 8,093,156 acres. Unfortunately, by 1900, Nevada had sold off all but a small fraction of the 2,061,967 acres of state-select land. The table below shows how most non-coastal western states stand today ordered by the year they became a state:

State	Year of Statehood	Acres Granted	Sections Granted	Acreage By 1995	Percent of Original
Nevada	1864	2,062,000	16, 36	2,500	.01%
Colorado	1876	3,686,000	16, 36	2,858,000	78%
Montana	1889	5,198,000	16, 36	5,132,000	99%
Washington	1889	2,376,000	16, 36	2,812,000	118%
Idaho	1890	2,964,000	16, 36	2,404,000	81%
Wyoming	1890	3,473,000	16, 36	3,602,000	104%
Utah	1896	5,844,000	16, 36, 2, 32	3,739,000	64%
New Mexico	1912	8,711,000	16, 36, 2, 32	9,217,000	106%
Arizona	1912	8,093,000	16, 36, 2, 32	9,471,000	117%

Arizona and New Mexico received approximately 11 percent of their total areas in federal land grants. For Nevada, this would have totaled 7,782,000 acres. The justification for granting four sections of land to Utah, Arizona, and New Mexico was due to the fact that **the land was arid and more of it was needed to achieve the purpose of the grant**, which is namely, support for the schools. Just like in Nevada, the land in Utah, Arizona, and New Mexico is much more arid and considered less valuable for the style of family farming at the time.

As was mentioned earlier, Nevada's population did not reach 60,000 until after the Civil War. This would have been during the fourth phase of statehood accession under which Utah, Arizona, and New Mexico entered the union. The necessity of granting more sections of land to these arid states had been recognized at that time and had Nevada followed the natural progression of entering the union, it too would have entered the union during the fourth phase and had received a land grant of nearly 8 million acres rather than the 2 million it settled for.

A few things stand out in the table above. The first is that Nevada has the unique distinction from the other nine western states listed as having relatively no school grant lands left. The other states have an average acreage in excess of 4 million acres. The "Percent of Original" column is also interesting in that four states actually have more than 100% of the original acres granted to them. The average "Percent of Original" is just over 85%. By 1889, when agitation at the federal level to reserve forests and other public lands was reaching a peak, most newly created states ended up keeping and even adding to their trusts. Montana, Washington, Wyoming, Arizona, and New Mexico all manage more acres of trust lands today than were in their original land grants, partly because Congress supplemented those grants with later grants for universities and other purposes. Also, **Arizona and New Mexico were allowed to choose additional lands** to make up for federal lands already claimed by the Forest Service. **What would Nevada's land holdings be today if it had received similar treatment?**

Present Issue

Alaska is not listed in the table above, but their land grant is even more interesting. By the time Alaska entered the union in 1958, Congress abandoned the township formula. Instead, **Alaska was allowed to choose more than 100 million acres of federal land**, 800,000 of which could be in proclaimed national forests. **This was equal to more than ten sections per township.** According to 2004 calculations, Alaska was identified in the beginning of this paper as being the second most federally owned state with 69% federal ownership. To put that into perspective, if Nevada were to be reduced to 69% federal ownership, 10.8 million of the 47.8 million acres currently under the Bureau of Land Management's stewardship would need to be granted to Nevada. The BLM's land holdings in Nevada would then be 37 million acres, which is two-thirds more land than what the BLM has combined in the states of Arizona and New Mexico. At present, nearly one fifth of BLM's nationwide land holdings are in Nevada.

The question in 2010 is how to best address this unequal situation to put Nevada on equal footing with the other states as was the intent of the land ordinances. In 1873, the Legislature passed a resolution asking for an additional 1 million acres of land, but Congress took no action. Again in 1907, the Legislature passed a resolution asking Congress for 2 million more acres of unappropriated government plateaus. They were lands suitable for grazing, but Congress once again took no action on the request. As recently as 2009, the Nevada Assembly passed a joint resolution with the state Senate urging Congress to enact legislation requiring the Secretary of the Interior to convey ownership of certain land to the State of Nevada for development of renewable energy projects. One of the justifications given is that the development of renewable energy projects in Nevada would stimulate the economy by providing a stable source of employment and revenue. Currently, no action has been taken on this recent request.

New Land Grant

The remedy for correcting Nevada's inequity is a new federal land grant to Nevada authorized by an Act of Congress. This can be approached in any number of ways. Simply granting more random sections of land is not the answer since that would put Nevada back in the same situation as 1864. Rather, taking Nevada's unique geography into account and current conditions within the state must be considered in any land grant.

Presently, the BLM is accepting a number of applications for renewable energy projects within Nevada. An argument can be made that if those public lands are appropriate for development then those lands should be granted to the state. It is one thing for the BLM to manage open lands in Nevada for open range and general public enjoyment purposes, but when those lands are being leased to private enterprises to make them inaccessible to the general public then the nature of those lands has changed. The fact that Nevada ended up being short-changed on its lands due to extraordinary historical conditions beyond its control should not result in what is becoming a renewable energy resource windfall for the BLM within Nevada's borders.

Nevada is among the lowest ranked states when it comes to funding education. If public lands within its borders are to be leased for specific non-general public purposes those revenues must be deposited in the permanent school trust fund to be used by the schools within this state. The mechanism for how to appropriately do this originated with the land ordinances, which is to grant lands to the states to be sold or leased for the benefit of the schools. It is the state's obligation, therefore, to receive lands from the federal government and utilize them in a profitable manner for the benefit of its schools. This is not the BLM's mission as a land agency.

Nevada needs to be self-determining with how its lands are developed and work directly with the applicants rather than sitting mostly on the sidelines in the hopes that the BLM will do what's in the best interests of the state. As previously noted, there has already been a precedent set in other states to receive additional land grants and Nevada needs to be treated no differently. Perhaps the best solution is for the state to identify lands in development corridors for renewable energy and urban growth. Nevada could then process and approve applications for renewable energy development quickly in a manner that is in the best interests of Nevadans.

Another precedent was set for land grants when the nation was moving west. It was recognized by the federal government that the railroads needed help in financing the laying of track across the country. Sections of land were granted to the railroad companies along railroad corridors so that those lands could be sold by the railroads to fund the westward expansion. In Nevada, the Central Pacific Railroad Company was granted more than 5 million acres. Today, rather than building railroads quickly, the West needs to produce energy quickly and Nevada can and should be the leader in that effort with its abundance of clean renewable energy resources to harness. The state of Nevada is in need of economic expansion through the harnessing of its renewable energy resources so it can pull itself out of the current recession. **A grant to the state for the purpose of putting it on equal footing with the other western states to develop renewable energy is simply the right thing to do.** The following table offers some guidance on what size of land grant might be appropriate to consider:

Possible Benchmarks to Use for a New Land Grant to Nevada	Acres Granted	% of Federal Land Holdings After Grant	BLM Acreage After Grant
Equal to ½ of AZ and NM land grant less 2 million acres received by NV	1,900,000	82%	45,900,000
Equal to grant received by Central Pacific Railroad less 2 million acres	3,000,000	80%	44,800,000
Equal to grant received by the Central Pacific Railroad in NV	5,000,000	77.5%	42,800,000
Average grant land acres managed by 7 non-coastal western states today	5,200,000	77%	42,600,000
Equivalent land grant to AZ and NM less 2 million acres previously received	5,800,000	76%	42,000,000
Equal to federal holdings in Alaska, next highest federally owned state	10,800,000	69%	37,000,000
Equal federal coverage of next highest federally owned state in the lower 48	19,000,000	57.5%	28,800,000

The table above is helpful in sorting out the appropriate size of grant to consider. Worth noting is that three of the seven scenarios fall in the 5 million plus acre range. A grant between 5 to 5.8 million acres appears to be appropriate given the nature of the request of restoring Nevada to an equal footing with the other western states in order to be competitive in the renewable energy economy. The first of the three 5 million plus acre scenarios was granted for development purposes. The second is equal to the average of what seven surrounding western states manage today. And the third puts Nevada on equal footing with New Mexico and Arizona (less the 2 million acres Nevada already sold). These states are two of the main competing states for the renewable energy market in the southwest and are two of the three states that entered the union in the fourth phase of state accession where Nevada would have most likely joined the union as well if not for the extraordinary circumstances of the Civil War.

For the reasons presented, a bill requesting a land grant for Nevada from acreage managed by the BLM for a minimum of 5,800,000 acres or more is appropriate and justifiable. Remarkably, as large as that sounds, **Nevada would still be the most federally owned state in the union with more BLM managed land within its borders than California, Arizona, and New Mexico combined!** If all of the 5.8 million acres are not immediately identifiable, the bill could allow for the granting of these lands in phases over time. However, as many acres that have been identified for renewable energy development can and should be granted immediately upon passage of the bill. Management of these new grant lands by the state should be addressed by Nevada during the bill drafting process as it may be argued that Nevada does not currently have either the financial or personnel resources to manage such a large grant. Of course, the BLM scarcely has the resources to manage the 47.8 million acres it currently holds in Nevada, so any concerns expressed in this area need not become a hindrance to passing the bill.

Managing the Grant

The types of lands that would be requested in the grant would be mostly ready for leasing to private entities for management. Rather than land management personnel, the state's primary need would be for personnel capable of executing leases. Fortunately, the state already has the resources to do this through its Division of State Lands within the Department of Natural Resources and Conservation. The Division of State Lands has a full workload implementing its primary mission to land conservation, so additional land staff resources would be needed as soon as practicable.

During the legislative session following the passage of a land grant act by Congress, the Legislature could pass a bill granting the authority and resources for the formation of a renewable resource land development section or division whose mission it would be to ensure the quick and profitable development of the granted lands. This group should eventually be made up of at least ten land professionals and put under the oversight of an agency responsible for ensuring the success of a viable and competitive renewable energy economy in Nevada.

Some may propose to sell the lands granted to generate revenues. However, during a depressed real estate market this strategy would not be advisable, especially in the remote areas where the majority of the granted lands will be located. Certain lands can be identified for disposal, such as those near growing urban areas to allow for tax revenues to be generated from the lands. In most cases though, disposal as a short-term revenue generator has not served Nevada well in the past. Rather, the lands must be put to use for renewable energy generation instead of being purchased by those who may not be ready or able to implement projects quickly. Generating revenues for the school trust fund in perpetuity through long-term leases would be more beneficial.



The western states that currently manage millions of acres of grant lands take a variety of approaches for funding the agencies that manage their school trust lands. It may take an amendment to the state's Constitution to implement some of the creative methods states have found to fund their land management agencies, but not necessarily. States use variants of four basic processes for funding state land office activities:

1. All land office functions are paid from the state's general fund by appropriation from the state legislature (e.g., Arizona, Nebraska, South Dakota, and Texas);
2. Management is appropriated by the state legislature out of a percentage of surface trust land revenues (New Mexico and Oregon);
3. Management is appropriated by the state legislature out of a percentage of both surface and subsurface trust land revenues (Washington); and
4. Management is appropriated by the state legislature out of a combination of receipts and general fund appropriations (California, Colorado, Idaho, Montana, Utah, and Wyoming).

For example:

- Oregon receives 36-1/4 percent of timber sale revenues but no general fund appropriations;
- Washington receives 25 percent of any revenues (50 percent on some lands) but no general fund appropriations;
- Idaho receives general fund appropriations plus 10 percent of renewable resource receipts;
- Colorado receives general fund appropriations plus 10 percent of any receipts;
- Utah receives general fund appropriations plus 20 percent of any receipts other than land sales;
- New Mexico receives no general fund appropriations but can keep an unspecified share-up from 20 percent before 1989--of surface receipts, as determined by legislative appropriation;
- In Wyoming, 25 percent of trust receipts go to the general fund to cover costs, but land management funds require legislative appropriations and in recent years such appropriations have been less than this 25 percent.

Nevada has been attempting to seek a remedy to its land situation for more than 144 years. It is time to recognize that Nevada's entry to the union was tied to the extraordinary conditions of a country divided by Civil War and the need to have the people of a territory step up to help keep the union intact. Nevadans answered the call to help preserve the union and the presidency. By doing so, they had no idea they would be compromising their future land holdings. This should no longer be something that continues to burden future generations of Nevadans. Rather, now more than ever, it is time to acknowledge Nevada's contribution to the nation and correct the inequity concerning its land grant.

The problems with Nevada's own land grant helped lead the way for other states like Utah, Arizona, and New Mexico to receive proportionally much more land than Nevada. While these states were given more land in recognition of the arid conditions within their borders, Nevada was neglected in the process and never made whole. Nevada needs to be allowed to utilize the resources within its borders immediately if it hopes to become a serious participant in the emerging renewable energy economy. The state should not have to be made to manage around a handicap of available land resources on which to build renewable energy projects that will put Nevadans to work, lift itself out of recession, and help fund its schools.

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